# UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO. : 7,052,534 B2 Page 1 of 4

APPLICATION NO.: 10/617818

DATED: May 30, 2006

INVENTOR(S): Toshiki Taguchi

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

#### In column 38, please amend claim 1 to read as follows:

1. (previously presented): An ink for inkjet recording, comprising a dye, water, a water-miscible organic solvent and a precursor of acid;

wherein the precursor of acid is a compound showing no acidity at the time of preparation and storage of the ink, but is capable of releasing acids by a reaction after aging or printing, or is capable of rendering the ink system acidic as a result of the reaction, and the precursor of acid includes at least one compound represented by the following formulae (1) to (9):

$$R_{101} \xrightarrow{X_1 - R_{102}} (1) \qquad R_{101} - S - X_1 - R_{102} (2)$$

$$R_{101} \xrightarrow{Q} X_1 - R_{102} (3) \qquad R_{100} - X_2 - P - X_4 - R_{103} (4)$$

$$R_{103}-X_2-P_{-R_{106}}$$
 (5)  $R_{107}-Y_1$   $N-Y_3R_{109}$  (6)

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$$\begin{array}{c|c}
R_{110} & R_{112} \\
R_{111} & R_{113} & (8)
\end{array}$$

$$R_{114} - C - Q$$
 (9)

wherein  $R_{101}$  represents an alkyl group, an alkenyl group, an alkynyl group, an aryl group, a heterocyclic group, an amino group, an alkoxy group, an aryloxy group, an alkylthio group or an arylthio group, and the groups may have a substituent;

 $R_{102}$  to  $R_{106}$  and  $R_{109}$  each represent an alkyl group, an alkenyl group, an alkynyl group, an aryl group or heterocyclic group, and the groups may have a substituent;

 $R_{107}$  and  $R_{108}$  each represent a hydrogen atom, a chemical bond forming a double bond by being linked together, a halogen atom, an alkyl group, an alkenyl group, an alkynyl group, an aryl group or a heterocyclic group, and the groups may have a substituent, and two of  $R_{107}$  and  $R_{108}$  may form a ring by combining with each other;

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: May 30, 2006 : Toshiki Taguchi

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

 $X_1$  to  $X_4$  each represent an oxygen atom, a nitrogen atom, a sulfur atom, or a group represented by  $-N(R_{119})$ -O- or  $-O-N(R_{119})$ -;  $R_{119}$  represents a hydrogen atom, an alkyl group, an aryl group or a heterocyclic group;

Y<sub>1</sub> to Y<sub>3</sub> each represent a carbonyl group, a sulfonyl group, or a group represented by  $-PO(R_{120})R_{121}$ ;  $R_{120}$  and  $R_{121}$  each represent an alkyl group, an aryl group, a heterocyclic group, an amino group, an alkoxy group, an aryloxy group, an alkylthio group or an arylthio group;

Z represents atoms capable of forming an aromatic heterocyclic ring; Q represents a halogen atom, an alkoxy group, an aryloxy group, an alkylthio group, an arylthio group, an amino group, an acyloxy group, an alkylsulfonyloxy group or an arylsulfonyloxy group:

W represents a carbon atom or a nitrogen atom; Q has the same definition as described above; R<sub>110</sub> and R<sub>111</sub> each represent a hydrogen atom, a halogen atom, an alkyl group, an aryl group, a heterocyclic group, an amino group, an alkoxy group, an aryloxy group, an alkylthio group, an arylthio group, an acyl group, an alkylsulfonyl group or an arylsulfonyl group;

R<sub>112</sub> and R<sub>113</sub> each represent a hydrogen atom, a halogen atom, or an alkyl group, an aryl group, a heterocyclic group, an alkoxy group, an aryloxy group, an alkylthio group, an arylthio group, an acyl group, an alkylsulfonyl group or an arylsulfonyl group;

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INVENTOR(S)

: May 30, 2006 : Toshiki Taguchi

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Q has the same definition as described above; R<sub>114</sub> represents an alkyl group, an aryl group, a heterocyclic group, an acyl group, an alkylsulfonyl group, an arylsulfonyl group, a phosphoric acid group, an alkylphosphonic acid group, an arylphosphonic acid group, a dialkylphosphonic acid group or a diarylphosphonic acid group; and

R<sub>115</sub> and R<sub>116</sub> each represent a hydrogen atom, a halogen atom, an alkyl group, an aryl group, a heterocyclic group, an amino group, an alkoxy group, an aryloxy group, an alkylthio group, an arylthio group, an acyl group, an alkylsulfonyl group or an arylsulfonyl group; and

the ink comprises the precursor of acid in an amount of 0.01 to 20 wt%.

Signed and Sealed this

Tenth Day of June, 2008

JON W. DUDAS Director of the United States Patent and Trademark Office